

CLAIMS

What is claimed is:

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8. A sensor array comprising at least two electronic devices which are supported for movement relative to one another and at least one stretchable

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11. The sensor array as in claim 10 wherein said interconnect comprises a plurality of “V” shaped sections.

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13. The sensor array as in claim 12 wherein said interconnect comprises a plurality of “V” shaped sections, which when unsupported form said coil.

14. The sensor array as in claim 9 wherein said coiled conductor is di-helic.

15. The sensor array as in claim 9 which comprises a tactile sensing array.

16. The sensor array as in claim 15 which comprises a tactile sensing portion of a robot.
17. The sensor array as in claim 16 wherein said sensor array is arranged in a flexible and stretchable skin of said robot.
18. The sensor array as in claim 9 which includes a plurality of said stretchable interconnects.
19. A process for making a stretchable interconnect for electrically connecting electronic devices which are supported for movement relative to one another, comprising:
 - forming said devices supported by a substrate, said devices being spaced apart from each other in said substrate;
 - depositing an interconnect conductor supported by said substrate for electrically coupling a contact of one device to a contact of another device,;
 - photolithographically patterning said interconnect conductor with a pattern which upon removal of said substrate from support of said interconnect conductor will cause said interconnect conductor to form a stretchable interconnect.
20. The process as in claim 19 wherein said interconnect conductor is formed with a stress gradient extending through at least a portion of the thickness of said conductor so that upon removal of said substrate from support of said interconnect conductor will cause said interconnect conductor to form a stretchable coil.

30. The process as in claim 29 further comprising mounting said sensor array to a tactile sensing portion of a robot.

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